

WHAT IS CLAIMED IS:

- 1                    **1.**     A method for compressing the representation of a  
2     sequence of points in a space, the method comprising:  
3                    dividing a sequence of points into segments of successive  
4                    points;  
5                    compressing each of the segments irrespective of the  
6                    compression applied to the other segments.
- 1                    **2.**     The method of claim **1**, wherein the step of dividing  
2     comprises  
3                    dividing a sequence of points into segments of  $S$  successive  
4                    points.
- 1                    **3.**     The method of claim **1**, wherein before the step of  
2     dividing, the following step is performed:  
3                    determining the value of  $S$ .
- 1                    **4.**     The method of claim 3, wherein the step of determining  
2     comprises  
3                    generating multiple compressions of the sequence, each of  
4                    the multiple compressions at a different value of  $S$ .
- 1                    **5.**     The method of claim 3, wherein the step of determining  
2     comprises  
3                    generating a compression of the sequence for each value of  $S$   
4                    from a minimum to a maximum.
- 1                    **6.**     The method of claim 3, wherein the step of determining  
2     comprises

3 generating a compression of the sequence for each value of S  
4 from a minimum of two (2) to a maximum equal to the number of  
5 points in the sequence.

1 7. The method of claim 3, wherein the step of determining  
2 comprises  
3 generating multiple compressions of the sequence, each of  
4 the multiple compressions at a different value of S; and  
5 determining the value of S to be the value of S generating the  
6 smallest of the multiple compressions.

1 8. The method of claim 1, wherein the step of compressing  
2 comprises  
3 compressing each of the segments of S successive, i-bit points  
4 into segments of j-bit points, where  $j \leq i$ .

1 9. The method of claim 8, wherein the value of j may vary  
2 from segment to segment.

1 10. The method of claim 8, wherein, for any given segment, j  
2 is the minimum number of bits necessary to represent the data in that given  
3 segment.

1 11. The method of claim 1, wherein the step of compressing  
2 comprises  
3 determining the largest coordinate in any dimension of any  
4 point in a segment;  
5 setting j for the segment to the ceiling of the base-2 log of that  
6 largest coordinate; and  
7 truncating from points of the segment most significant bits

8           exceeding j bits.

1                   12.   The method of claim **1**, wherein the sequence of points  
2   is an electronic signature.

1                   13.   The method of claim **1**, wherein the step of compressing  
2   comprises  
3                   compressing each of the segments without losing any of the  
4                   data in any of the segments.

1                   14.   The method of claim **1**, wherein the step of compressing  
2   comprises  
3                   compressing each of the segments, losing data as directed by  
4                   an invoking user.

1                   15.   The method of claim **1**, wherein before the step of  
2   dividing the following step is performed:  
3                   converting DrawTo data to relative-movement data.

1                   **16.**   A method for compressing an electronic signature, the  
2   method comprising:  
3                   dividing an electronic signature comprising a sequence of i-bit  
4                   points into segments of successive points numbering S;  
5                   compressing each of the segments into segments of j-bit points  
6                   without losing any of the data in the signature by  
7                               determining the largest coordinate in any  
8                               dimension of any point in a segment;  
9                               setting j for the segment to the ceiling of the base-  
10                   2 log of that largest coordinate; and  
11                               truncating from points of the segment most

12 significant bits exceeding j bits.

1 17. The method of claim **16**, wherein before the step of  
2 dividing, the following steps are performed:  
3 converting DrawTo data to relative-movement data;  
4 generating multiple compressions of the sequence, each of  
5 the multiple compressions at a different value of S; and  
6 determining the value of S to be the value of S generating the  
7 smallest of the multiple compressions.

1 **18.** A data store wherein is located a computer program for  
2 compressing the representation of a sequence of points in a space by:  
3 dividing a sequence of points into segments of successive  
4 points;  
5 compressing each of the segments irrespective of the  
6 compression applied to the other segments.

1 **19.** A data store wherein is located a computer program for  
2 compressing an electronic signature by:  
3 dividing an electronic signature comprising a sequence of i-bit  
4 points into segments of successive points numbering S;  
5 compressing each of the segments into segments of j-bit points  
6 without losing any of the data in the signature by  
7 determining the largest coordinate in any  
8 dimension of any point in a segment;  
9 setting j for the segment to the ceiling of the base-  
10 2 log of that largest coordinate; and  
11 truncating from points of the segment most  
12 significant bits exceeding j bits.

1                   20. The data store of claim **19**, wherein the computer  
2 program compresses an electronic signature by, before the step of  
3 dividing:  
4                   converting DrawTo data to relative-movement data;  
5                   generating multiple compressions of the sequence, each of  
6 the multiple compressions at a different value of S; and  
7                   determining the value of S to be the value of S generating the  
8 smallest of the multiple compressions.

1                   **21.** A compressor for compressing the representation of a  
2 sequence of points in a space, comprising:  
3                   the data store of claim **18**;  
4                   a CPU for executing the computer program in the data store;  
5                   and  
6                   a link, communicatively coupling the data store and the CPU.

1                   **22.** A compressor for compressing an electronic signature,  
2 comprising:  
3                   the data store of claim **19**;  
4                   a CPU for executing the computer program in the data store;  
5                   and  
6                   a link, communicatively coupling the data store and the CPU.